

REMARKS

Claims 1-8 and 10-21 are pending. No new matter has been added by way of the present amendment. For instance, claim 8 has been amended to correct the typographical errors of "power" (should have been "powder") and "oparts" (should have been "parts"). Claim 8 has also been amended to indicate that the "parts by weight" are in relation to 100 parts by weight of the total monomers used for the manufacture of the graft copolymer latex. This is evident to those of skill in the art from a review of the present specification, including Preferred Embodiments 1-6. Claim 8 has also been amended to indicate that the core polymer is manufactured in the presence of the seed polymer, and that the graft shell polymer is manufactured in the presence of the core polymer. Lastly, the reactive surfactant of graft shell polymer manufacturing step is further defined as having double bonds capable of reacting with a monomer during polymerization as supported by the present specification, for instance, reference is made to page 12, lines 9-11. Accordingly, no new matter has been added.

In view of the following remarks, the Examiner is respectfully requested to withdraw all rejections and allow the currently pending claims.

Request for Consideration of Claims 1-7

In the outstanding Office Action, the Examiner has indicated that the claims of Group I and II do not share a technical feature that represents a contribution over the prior art. However, as shown below, the present invention is patentable. Thus, the claims of Group I and II share unity of invention. The Examiner is thus requested to properly consider claims 1-7.

Issues under 35 U.S.C. § 112, second paragraph

The Examiner has rejected claims 8 and 10-21 under 35 U.S.C. § 112, second paragraph for the reasons recited at pages 2-3 of the outstanding Office Action. Applicants respectfully traverse this rejection.

First, the Examiner points to two improper spellings in claim 8. However, these inadvertent typographical errors have been addressed. For instance, claim 8 has been amended to correct the typographical errors of “power” (should have been “powder”) and “oparts” (should have been “parts”).

Second, the Examiner has asserted that the limitation “the step of manufacturing of the graft copolymer latex” in claim 8, lacks sufficient antecedent support. Applicants traverse and submit that claim 8 has been amended to address to this issue.

Third and lastly, the Examiner asserts that the recitation of “parts by weight” of certain components has not bases for the parts by weight. Applicants clarified the claim language to indicate that the parts by weight are based on 100 parts by weight of the total monomer used for the manufacture of the graft copolymer latex.

In view of the above, Applicants submit that the present claims fully satisfy the requirements of 35 U.S.C. § 112, second paragraph. The Examiner is thus requested to withdraw these rejections.

Issues under 35 U.S.C. § 102(b)

The Examiner has rejected claims 8 and 10-21 under 35 U.S.C. § 102(b) as being anticipated by (1) Oshima et al., USP 5,206,299 (hereinafter referred to as Oshima ‘299), (2) Oshima et al., USP 5,362,804 (hereinafter referred to as Oshima ‘804) or (3) Bertelo et al., USP

5,773,520 (hereinafter referred to as Bertelo '520). Applicants respectfully traverse these rejections.

The Present Invention and its advantages

The present invention relates to a method of preparing dried powder of a graft copolymer latex by spraying and drying. Dried powder of graft copolymer latexes prepared by conventional methods have several disadvantages including the problem of decreasing thermal stability and mechanical properties caused by the employed surfactants. To solve the problem of decreasing thermal stability and mechanical properties due to the surfactant left in the conventional polymers in the form of a dried powder prepared by spraying and drying, the present invention provides a method of preparing dried powder of a graft copolymer latex having a superior stability and the solid weight fraction of 50~70 weight% by using a reactive surfactant.

The stability of the latex can be increased through chemical bonding (not physical absorption) of the present reactive surfactant. Also, a dried powder prepared in a method using the present reactive surfactant can prevent the surfactant from decreasing the thermal stability during melting and mixing of the dried powder with resins. The dried powder of the present graft copolymer latex also has low moisture content and high powder density. Further, thermoplastic resin compositions containing the present dried powder of the graft copolymer latex have superior impact strength, tensile strength, luster and especially thermal stability.

Distinctions Between the Present Invention and the Cited Art

As mentioned above, the present invention employs a reactive surfactant. The Examiner is requested to specifically consult the language in claim 8, for instance, see the language requiring a reactive surfactant which has double bonds capable of reacting with a monomer during the polymerization. The Examiner should also consult the more specific language dealing with the present reactive surfactant as recited in claim 13. Such a reactive surfactant of either claim 8 or claim 13 is used to prepare the present graft shell. However, none of Oshima '299, Oshima '804 or Bertelo '520 suggest or disclose such use of a reactive surfactant. For a rejection to constitute "anticipation", all material elements of a claim must be found in the cited art reference. *In re Marshall*, 577 F.2d 301, 198 USPQ 344 (CCPA 1978).

Accordingly, there exists no anticipation of independent claim 8, or claims 10-21, which depend thereon, based upon the cited art. The Examiner is thus respectfully requested to withdraw these rejections and allow the presently pending claims.

In view of the above, Applicants respectfully submit that the present claims are in condition for allowance. The Examiner is therefore respectfully requested to withdraw all rejections and allow the currently pending claims.


If the Examiner has any questions or comments, please contact Craig A. McRobbie, Registration No. 42,874 at the offices of Birch, Stewart, Kolasch & Birch, LLP.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for

any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

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Respectfully submitted,

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